

ABSTRACT

To perform fuel injection under fuel pressure as high as needed in an operation range of from cranking to self-sustaining operation via full expansion.

A fuel supply fuel system for a direct fuel injection type internal combustion engine is provided with a high-pressure fuel pump to directly inject fuel, which has been pressurized by the high-pressure fuel pump, from injectors into combustion chambers of the engine. An electromotor is arranged to auxiliarily drive the high-pressure fuel pump. At the time of a start-up of the engine, driving of the high-pressure fuel pump or an assist to drive torque for the high-pressure fuel pump is performed by the auxiliary power means.